



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-1011; Project Identifier MCAI-2021-00867-R; Amendment 39-21830; AD 2021-24-09]

RIN 2120-AA64

Airworthiness Directives; Bell Textron Canada Limited Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Bell Textron Canada Limited Model 430 helicopters. This AD was prompted by an in-flight failure of the main rotor (M/R) pitch link clevis (clevis) due to fatigue damage and excessive wear. This AD requires a visual inspection of the M/R clevis, rod end, and a certain part-numbered universal bearing, performing a purge grease, and performing a magnetic particle inspection of each M/R clevis. Depending on the visual inspection and magnetic particle inspection results, this AD requires removing certain parts from service, replacing certain parts, and performing additional actions. This AD also requires recurring inspections of each M/R clevis and each universal bearing. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD becomes effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain document listed in this AD as of [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The FAA must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the

instructions for submitting comments.

- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this final rule, contact Bell Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J 1R4, Canada; telephone 1-450-437-2862 or 1-800-363-8023; fax 1-450-433-0272; email productsupport@bellflight.com; or at <https://www.bellflight.com/support/contact-support>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1011.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1011; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the Transport Canada AD, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Hal Jensen, Aerospace Engineer, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 950 L'Enfant Plaza N SW, Washington, DC 20024; telephone (202) 267-9167; email hal.jensen@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

Transport Canada, which is the aviation authority for Canada, has issued Transport Canada AD CF-2021-26, dated July 26, 2021 (Transport Canada AD CF-2021-

26), to correct an unsafe condition for Bell Textron Canada Limited Model 430 helicopters, serial numbers 49001 through 49129. Transport Canada advises of an in-flight failure of an M/R clevis which resulted in loss of control of the helicopter and fatal injuries to occupants. Transport Canada further advises that the M/R clevis part number (P/N) 430-010-432-101 fractured at the exposed thread area above the nut, which was consistent with fatigue damage. Transport Canada also advises an inspection of the failed part determined universal bearing P/N 212-010-412-001 of the M/R pitch link assembly had excessive wear and increased resistance to rotation. Transport Canada states a similar accident previously occurred on the same model helicopter in which the M/R clevis was found to have fractured at the neck area due to fatigue damage. Transport Canada states the restriction in freedom of movement of the universal bearing can cause increased loads on the M/R pitch link assembly and subsequent fatigue failure of the M/R clevis prior to its life limit. Finally, Transport Canada advises the accident investigation is still ongoing. This condition, if not addressed, could result in crack initiation at the M/R clevis neck or threaded area and failure of the M/R pitch link, resulting in loss of control of the helicopter.

Accordingly, Transport Canada AD CF-2021-26 requires visually inspecting the M/R clevis and rod end for wear and damage and performing corrective actions. Transport Canada AD CF-2021-26 also requires for certain part-numbered M/R rotor pitch link assemblies that have accumulated 5000 hours air time or less and have a universal bearing P/N 212-010-412-001 that is unserviceable, replacing the universal bearing. Transport Canada AD CF-2021-26 requires for certain part-numbered M/R pitch link assemblies that have accumulated more than 5000 hours air time and have a universal bearing P/N 212-010-412-001 with signs of binding or stiffness, replacing both the universal bearing and the M/R clevis or if the universal bearing is unserviceable but there are no signs of binding or stiffness, replacing only the universal bearing.

Transport Canada AD CF-2021-26 requires performing a purge grease of each universal bearing and performing a magnetic particle inspection of the M/R clevis to detect cracks, replacing any M/R clevis with cracks, or if the M/R clevis does not have any cracks, replacing any missing cadmium plating.

Additionally, Transport Canada AD CF-2021-26 requires after the initial visual and magnetic particle inspections, performing recurring visual inspections of the M/R clevis for corrosion and mechanical damage and performing corrective actions as needed. Transport Canada AD CF-2021-26 also requires performing recurring visual inspections of the universal bearing for binding, stiffness, wear, damage looseness, excess axial and radial play, and performing corrective actions as needed. Transport Canada AD CF-2021-26 requires reporting any cracks or M/R clevises that are beyond published limits to Bell Product Support Engineering. Transport Canada considers its AD an interim action and states that further AD action may follow.

FAA's Determination

These helicopters have been approved by the aviation authority of Canada and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with Canada, Transport Canada, its technical representative, has notified the FAA of the unsafe condition described in its AD. The FAA is issuing this AD after evaluating all known relevant information and determining that the unsafe condition described previously is likely to exist or develop on other helicopters of these same type designs.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Bell Alert Service Bulletin 430-21-60, dated July 13, 2021. This service information specifies procedures to visually inspect the M/R clevis and rod ends for wear or damage, the M/R clevis for corrosion or mechanical damage and the universal bearings for binding, stiffness, wear, looseness, excess axial and radial play, and damage. This service information also specifies procedures to perform a magnetic particle inspection, and recurring inspections of each M/R clevis and each universal bearing.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

AD Requirements

This AD requires within 25 hours time-in-service (TIS) or 30 days, whichever occurs first after the effective date of this AD, removing and disassembling a certain part-

numbered M/R pitch link assembly and visually inspecting a certain part-numbered M/R clevis and rod end for wear, corrosion, and damage, which may be indicated by distortion, bending, a crack, or damaged M/R clevis threads, and removing any affected parts from service before further flight. This AD also requires visually inspecting a certain part-numbered universal bearing for binding, stiffness, wear, looseness, excess axial and radial play, and damage, which may be indicated by distortion, bending, or a crack. If certain discrepancies are found, and a certain part-numbered M/R pitch link assembly that has accumulated 5,000 or less total hours TIS is installed, this AD requires before further flight, removing a certain part-numbered universal bearing from service. If certain discrepancies are found, and a certain part-numbered M/R pitch link assembly that has accumulated more than 5,000 total hours TIS is installed, this AD requires before further flight and depending on the discrepancies, removing a certain part-numbered universal bearing and the M/R clevis from service or removing only the universal bearing from service.

This AD also requires performing a purge grease of each universal bearing and performing a magnetic particle inspection of each M/R clevis for a crack in accordance with the applicable service information. Following the magnetic particle inspection, if there is a crack, this AD requires before further flight, removing each affected M/R clevis from service. If there is no crack, this AD requires performing a selective brush cadmium plating and applying a chromate conversion coating.

This AD requires within 50 hours TIS after completion of the initial inspections required by this AD, and thereafter at intervals not to exceed 50 hours TIS, using a 10X magnifying glass, visually inspecting the neck and threaded area of each M/R clevis for wear, corrosion, and damage, which may be indicated by distortion, bending, a crack, or damaged M/R clevis threads, and depending on the inspection results before further flight, removing the affected part from service and replacing with an airworthy part, and repeating the magnetic particle inspection of each M/R clevis.

Finally, AD requires within 150 hours TIS after the completion of the initial inspections required by this AD, and thereafter at intervals not to exceed 150 hours TIS, repeating the visual inspection of each universal bearing for binding, stiffness, wear,

looseness, excess axial and radial play, and damage, and performing a purge grease of each universal bearing.

Differences between this AD and Transport Canada AD CF-2021-26

Transport Canada AD CF-2021-26 specifies compliance times in terms of air time, whereas this AD requires using hours TIS. Where the service information required by Transport Canada AD CF-2021-26 specifies to report any signs of cracking to Bell Product Support Engineering, this AD does not require reporting any information.

Transport Canada AD CF-2021-26 specifies replacing any affected part, whereas this AD requires removing the affected part from service and then replacing with an airworthy part.

Interim Action

The FAA considers this AD to be an interim action. Once final action has been identified, the FAA might consider further rulemaking.

Justification for Immediate Adoption and Determination of the Effective Date

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) (5 U.S.C. 551 *et seq.*) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for “good cause,” finds that those procedures are “impracticable, unnecessary, or contrary to the public interest.” Under this section, an agency, upon finding good cause, may issue a final rule without providing notice and seeking comment prior to issuance. Further, section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause.

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies foregoing notice and comment prior to adoption of this rule because if not corrected, the unsafe condition could lead to crack initiation at the M/R clevis neck or threaded area and consequent failure of the M/R pitch link, resulting in loss of control of the helicopter.

In addition, the compliance time for the required actions is within 25 hours TIS or 30 days, whichever occurs first after the effective date of this AD, a shorter time period than the time necessary for the public to comment and for publication of the final rule.

Therefore, notice and opportunity for prior public comment are impracticable and contrary to public interest pursuant to 5 U.S.C. 553(b)(3)(B). In addition, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days, for the same reasons the FAA found good cause to forgo notice and comment.

Comments Invited

The FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-1011; Project Identifier MCAI-2020-00867-R” at the beginning of your comments. The most helpful comments reference a specific portion of the final

rule, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this final rule.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this AD contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this AD, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this AD. Submissions containing CBI should be sent to Hal Jensen, Aerospace Engineer, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 950 L'Enfant Plaza N SW, Washington, DC 20024; telephone (202) 267-9167; email hal.jensen@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Regulatory Flexibility Act

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without prior notice and comment, RFA analysis is not required.

Costs of Compliance

The FAA estimates that this AD affects 29 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the

following costs to comply with this AD.

Removing and disassembling each M/R pitch link assembly and inspecting each M/R clevis and rod end takes about 4 work-hours for an estimated cost of \$340 per inspection and \$9,860 for the U.S. fleet.

Inspecting each universal bearing takes about 4 work-hours for an estimated cost of \$340 per inspection and \$9,860 for the U.S. fleet.

If required, replacing each universal bearing takes about 4 work-hours for an estimated cost of \$340 and parts cost about \$1,000 for an estimated cost of \$1,340 per replacement.

If required, replacing each universal bearing and each M/R clevis takes about 8 work-hours for an estimated cost of \$680 and parts cost about \$3,000 for an estimated cost of \$3,680 per replacement of both parts.

Performing a purge grease on each universal bearing takes about 0.25 work-hours for an estimated cost of \$22 per purge.

Performing a magnetic particle inspection of each M/R clevis takes about 2 work-hours for an estimated cost of \$170 per inspection.

Performing a selective brush cadmium plating takes about 4 work-hours for an estimated cost of \$340 per helicopter.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866, and
- (2) Will not affect intrastate aviation in Alaska.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-24-09 Bell Textron Canada Limited: Amendment 39-21830; Docket No. FAA-2021-1011; Project Identifier MCAI-2021-00867-R.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bell Textron Canada Limited Model 430 helicopters, having serial number 49001 through 49129, inclusive, certificated in any category.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6220, Main Rotor Head.

(e) Unsafe Condition

This AD was prompted by an in-flight failure of the main rotor (M/R) pitch link clevis (clevis) due to fatigue damage and excessive wear. The FAA is issuing this AD to detect and address any wear and damage of the M/R clevis neck or threaded area. The unsafe condition, if not addressed, could result in crack initiation at the M/R clevis neck and failure of the M/R pitch link, resulting in loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Within 25 hours time-in-service (TIS) or 30 days, whichever occurs first, after the effective date of this AD:

(i) Remove and disassemble each M/R pitch link assembly part number (P/N) 430-010-411-105, or P/N 430-010-411-107, but do not remove the inserts from the tube. Visually inspect the M/R clevis P/N 430-010-432-101 and rod end for wear, corrosion, and damage, which for the purposes of this inspection may be indicated by distortion, bending, a crack, or damaged M/R clevis threads. If there is any wear, corrosion or damage, before further flight, remove the affected M/R clevis or the affected rod end from service.

(ii) Visually inspect each universal bearing P/N 212-010-412-001 for binding, stiffness, wear, looseness, excess axial and radial play, and damage, which for the purposes of this inspection may be indicated by distortion, bending, or a crack.

(A) If there is any wear, looseness, excess axial and radial play, or damage and the M/R pitch link assembly is P/N 430-010-411-105 or P/N 430-010-411-107 and has accumulated 5,000 or less total hours TIS, before further flight, remove the universal bearing P/N 212-010-412-001 from service and replace with an airworthy part.

(B) If there is any binding or stiffness and the M/R pitch link assembly is P/N 430-010-411-105 or P/N 430-010-411-107 and has accumulated more than 5,000 total hours TIS, before further flight, remove the universal bearing P/N 212-010-412-001 and M/R clevis from service and replace with airworthy parts.

(C) If there is any wear, looseness, excess axial and radial play, or damage and the M/R pitch link assembly is P/N 430-010-411-105 or P/N 430-010-411-107 and has accumulated more than 5,000 total hours TIS, before further flight, remove the universal bearing P/N 212-010-412-001 from service and replace with an airworthy part.

(iii) Purge grease the bearings of each universal bearing.

(iv) Perform a magnetic particle inspection for any crack on each M/R clevis by following the Accomplishment Instructions, Part I, paragraphs 8. through 8.d., of Bell Alert Service Bulletin 430-21-60, dated July 13, 2021 (ASB 430-21-60). If there is any crack, before further flight, remove each affected M/R clevis from service. If there is no crack, before further flight, perform a selective brush cadmium plating to replace any missing cadmium plating and apply a chromate conversion coating.

(2) Within 50 hours TIS after completion of paragraph (g)(1) of this AD, and thereafter at intervals not to exceed 50 hours TIS:

(i) Using a 10X magnifying glass, visually inspect the neck and threaded area of each M/R clevis for wear, corrosion, and damage, which for the purposes of this inspection may be indicated by distortion, bending, a crack, or damaged M/R clevis threads. Refer to Figure 3 of ASB 430-21-60 for a depiction of the area to inspect on each M/R clevis. If there is any wear, corrosion, or damage, before further flight, remove the affected M/R clevis from service and replace with an airworthy part.

(ii) Perform the actions required in paragraph (g)(1)(iv) of this AD for each M/R clevis.

(3) Within 150 hours TIS after the completion of paragraph (g)(1) of this AD, and thereafter at intervals not to exceed 150 hours TIS, visually inspect and purge grease each universal bearing, by performing the actions as required in paragraphs (g)(1)(ii) and (iii) of this AD.

(h) Special Flight Permits

A special flight permit may be permitted provided that there are no passengers onboard.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Hal Jensen, Aerospace Engineer, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 950 L'Enfant Plaza N SW, Washington, DC 20024; telephone (202) 267-9167; email hal.jensen@faa.gov.

(2) The subject of this AD is addressed in Transport Canada CF-2021-26 AD, dated July 26, 2021. You may view the Transport Canada AD at <https://www.regulations.gov> in Docket No. FAA-2021-1011.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Bell Alert Service Bulletin 430-21-60, dated July 13, 2021.

(ii) [Reserved]

(3) For service information identified in this AD, contact Bell Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J 1R4, Canada; telephone 1-450-437-2862 or 1-800-363-8023; fax 1-450-433-0272; email productsupport@bellflight.com; or at <https://www.bellflight.com/support/contact-support>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on November 16, 2021.

Ross Landes, Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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